National Institute of Environmental Health Sciences

Global warming possibly linked to an enhanced risk of suicide: Data from Italy, 1974-2003

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Abstract:

BACKGROUND: The global increase in surface temperature (known as global warming) was found to impact on mortality through ill health, particularly among the elderly and in summer. This study sets out to explore the impact of global warming on suicide mortality, using data from Italy. METHODS: Monthly data on suicide mortality and temperature were obtained for a 30-year period (from January 1974 to December 2003), and the relation between them was investigated using the Gaussian low-pass filter, linear correlation analysis and rank analysis. RESULTS: For males, increasing anomalies in monthly average temperatures associated to a higher monthly suicide mean from May to August and, to a lower extent, in November and December. In January, on the other hand, increasing anomalies in monthly average temperatures appeared to be coupled to a lower number of suicides. For females, the links between temperature and suicides are less consistent than for males, and sometimes have a reverse sign, too. LIMITATIONS: Data could not be analyzed according to age, since this information was not available across the whole time interval. The use of monthly data, instead of daily data (unavailable), is another major limitation of this study. CONCLUSIONS: An improvement in the ability of communities to adjust to temperature changes by implementing public health interventions may play an important part in preserving the wellness of the general population, and also in limiting the worst consequences of suicidal behaviour.

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Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Italy

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Injury, Mental Health/Stress

Mental Health Effect/Stress: Mood Disorder

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Outcome Change Prediction

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Short-Term (

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

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